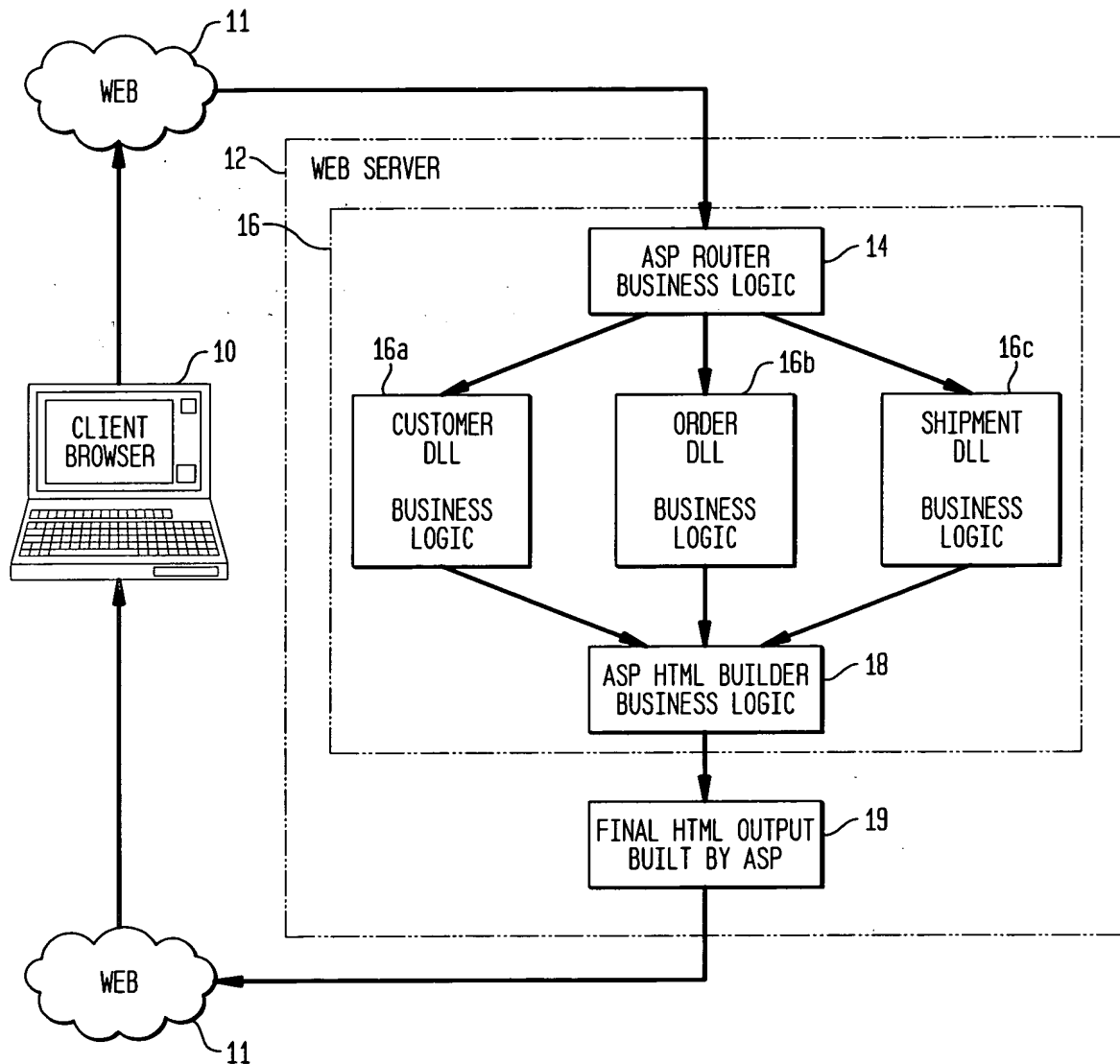




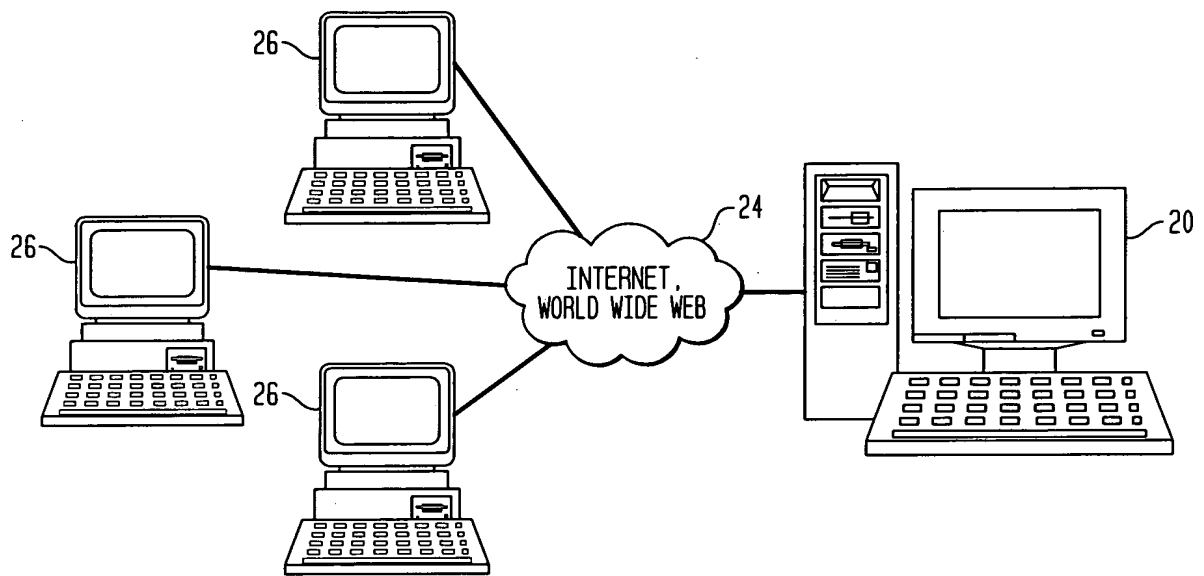
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**FIG. 1**  
(PRIOR ART)



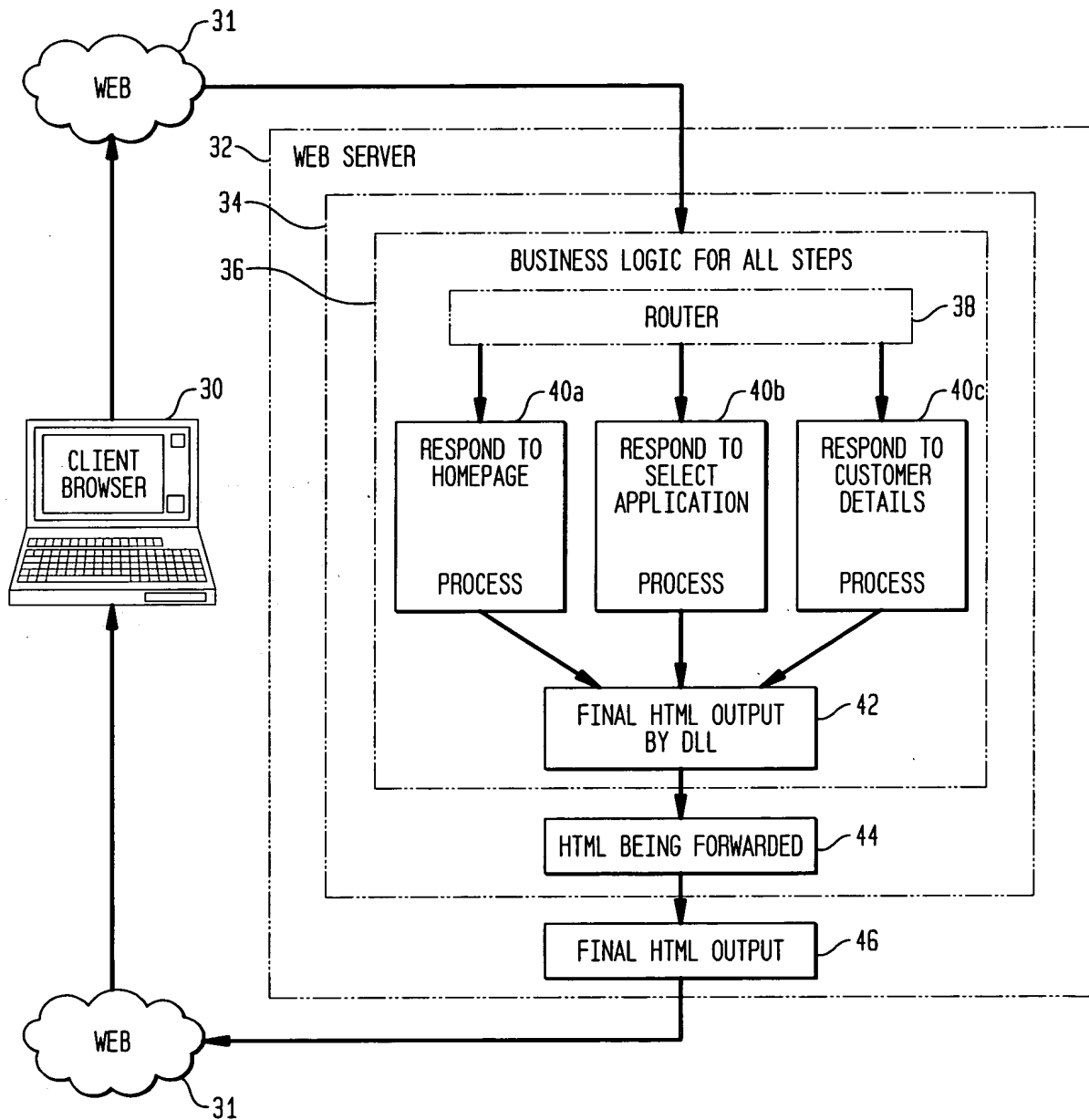
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FIG. 2



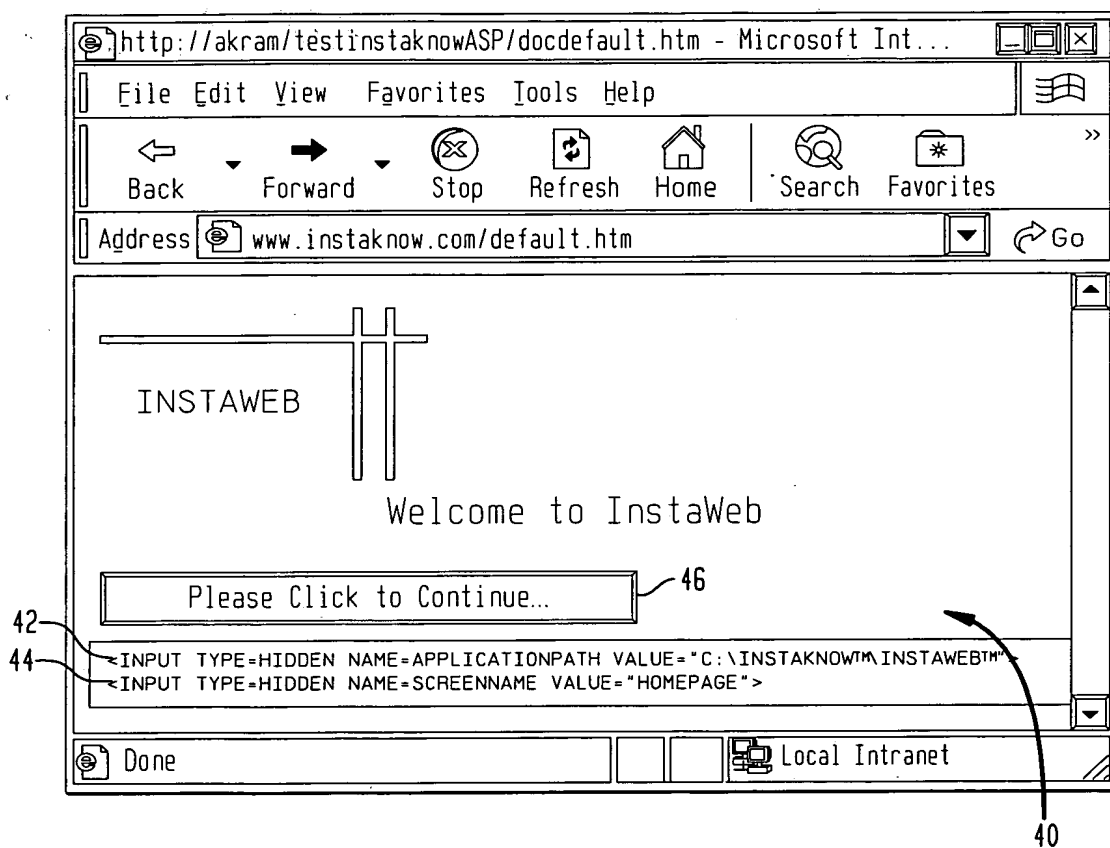
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FIG. 3



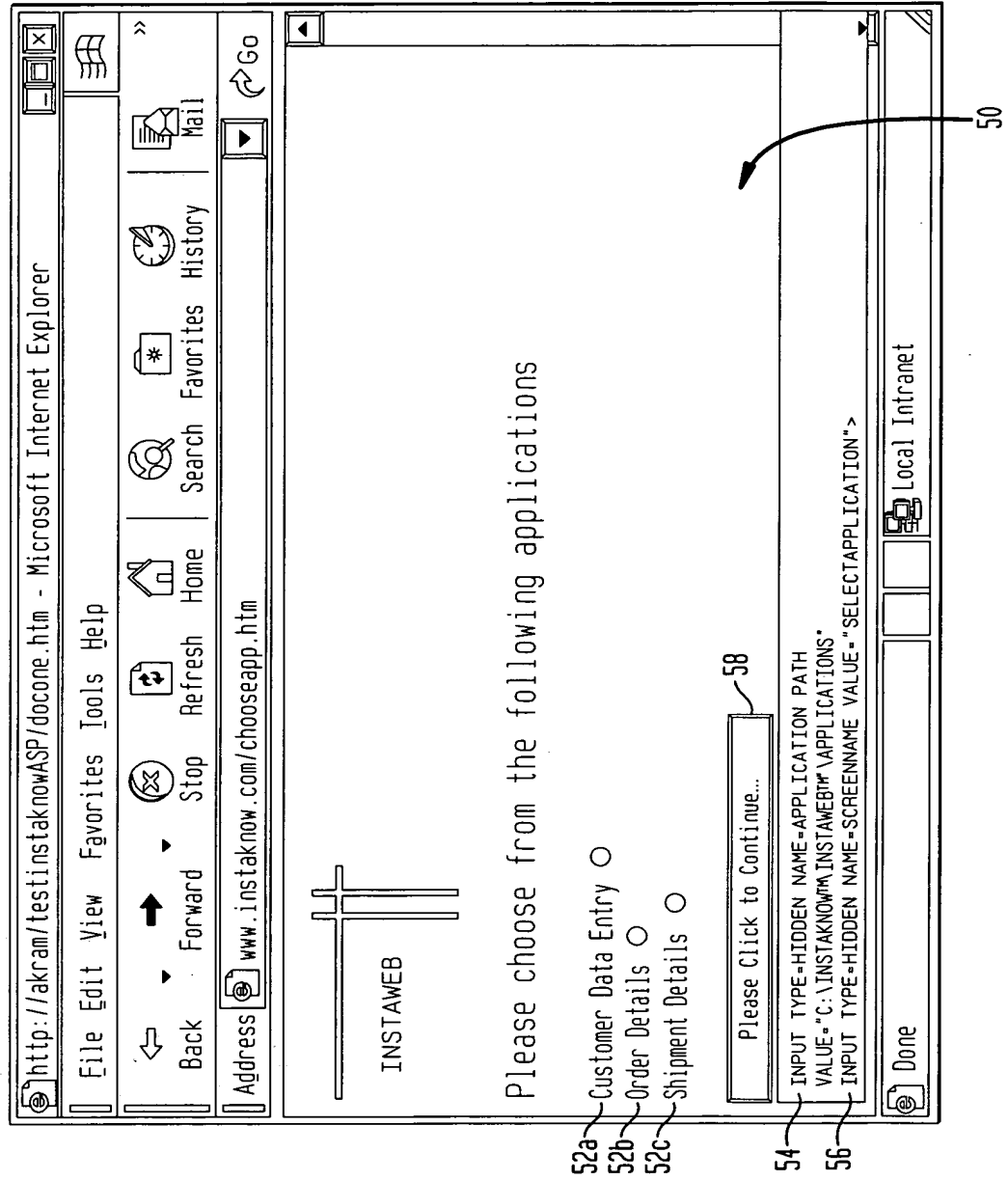
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FIG. 4



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FIG. 5



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FIG. 6

The screenshot shows a Microsoft Internet Explorer browser window. The title bar reads "http://akram/testinstaknowASP/doctwo.htm - Microsoft Internet Explorer". The menu bar includes "File", "Edit", "View", "Favorites", "Tools", and "Help". The toolbar contains icons for "Back", "Forward", "Stop", "Refresh", "Home", "Search", "Favorites", "History", and "Mail". The address bar shows "www.instaknow.com/customerdetails.htm".

The main content area displays a form titled "INSTAWEB" with a logo consisting of a horizontal line and a vertical line forming a cross. Below the logo, the text "Please enter the following information" is displayed. The form contains the following fields:

- 62a** Name: A text input field.
- 62b** Date of Birth: A text input field.
- 62c** City: A text input field.
- 62d** E-mail Address: A text input field.

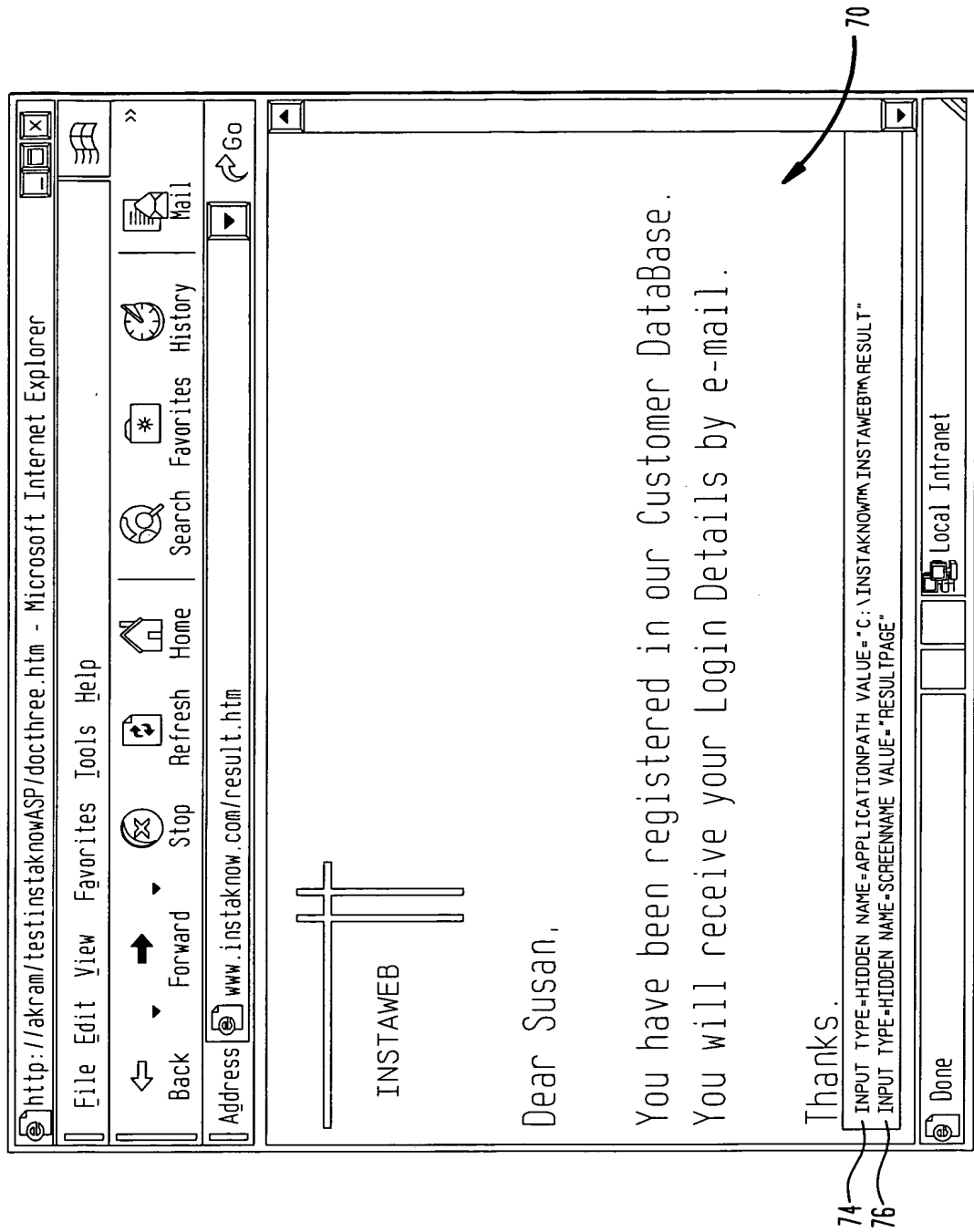
Below these fields is a button labeled "Please Click to Continue..." (63). Below the button is a hidden input field (64) with the text "INPUT TYPE=HIDDEN NAME=APPLICATIONPATH VALUE='C:\INSTAWEB\INSTAKNOW\M\CUSTOMER'>".

The status bar at the bottom shows "Done" and "Local Intranet".

A label **60** with an arrow points to the main content area of the browser window.

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FIG. 7



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FIG. 8

82

InstaKnow - Total Solution

File Edit Run Tools Window Help

Menu Bar

Verbs

Nodes

Get Stock Details From MSN Investor

List of processes in Application

- ACCEPT Accept Display Flag
- EXTRACT NON WEB DATA:: Read Input Stock List *Load Excel workbook containing stock list*
- EXTRACT HTML DATA:: Initial Navigate to MSN Inves *Read first row of stock list*
- POSITION P001\_ReadStockListMoveFirst
- Set P001\_msnStkInp.Symbol = "IBM"
- While P001\_ReadStockList\_EOF Not Equal True
  - Set P001\_msnStkInp.Symbol = P001\_ReadStockList StockSymbol
  - EXTRACT HTML DATA:: Get details for one stock from MSN Investor
  - Set P001\_DataToBeSaved\_CURRENTROW = P001\_ReadStockList\_CURRENTROW
  - POSITION P001\_msnStk.MoveLast
  - ASSIGN MoveStockDetailsToOutput *An Individual Step of a process*
  - POSITION P001\_ReadStockList.MoveNext
- SAVE P001\_DataToBeSaved As WriteToExcel. *Display will be shown to the user list*
- IF P001\_DisplayFlag Equals True
- DISPLAY : Display the output

Process Tree 80

Go to latest extracted view

Data Groups, Data Elements, and their attributes

	Name	Value	Default Value	Instance	Type	Precision
<input type="checkbox"/>	P001_ReadStockList.StockSymbol			M	VARCHAR	2
<input type="checkbox"/>	P001_ReadStockList_CURRENTROW		1	S	NUMBER	2
<input type="checkbox"/>	P001_ReadStockList_RECORDCOUNT		0	S	NUMBER	2
<input type="checkbox"/>	P001_ReadStockList_EOF		True	S	BOOLEAN	2
<input type="checkbox"/>	P001_ReadStockList_BOF		True	S	BOOLEAN	2

StockDetailsFromMSNInvestor Total

FIG. 9

90

InstaKnow - Application Wizard

92

Application Name:

Get Stock Details From MSN Investor

At what stage is the Application right now?

Trial

Trial

Improvements

Confirmed

Ready

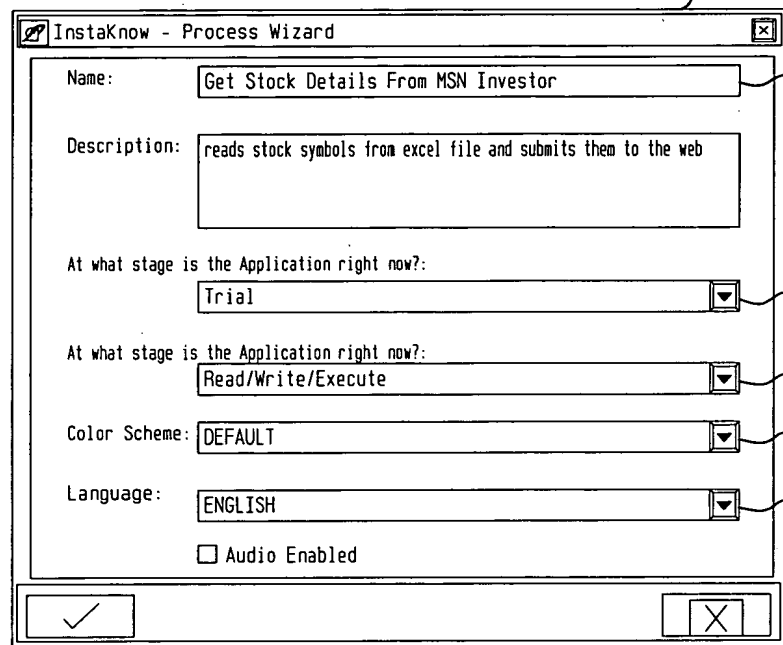
94



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**FIG. 10**

100



**InstaKnow - Process Wizard**

Name:  102

Description:

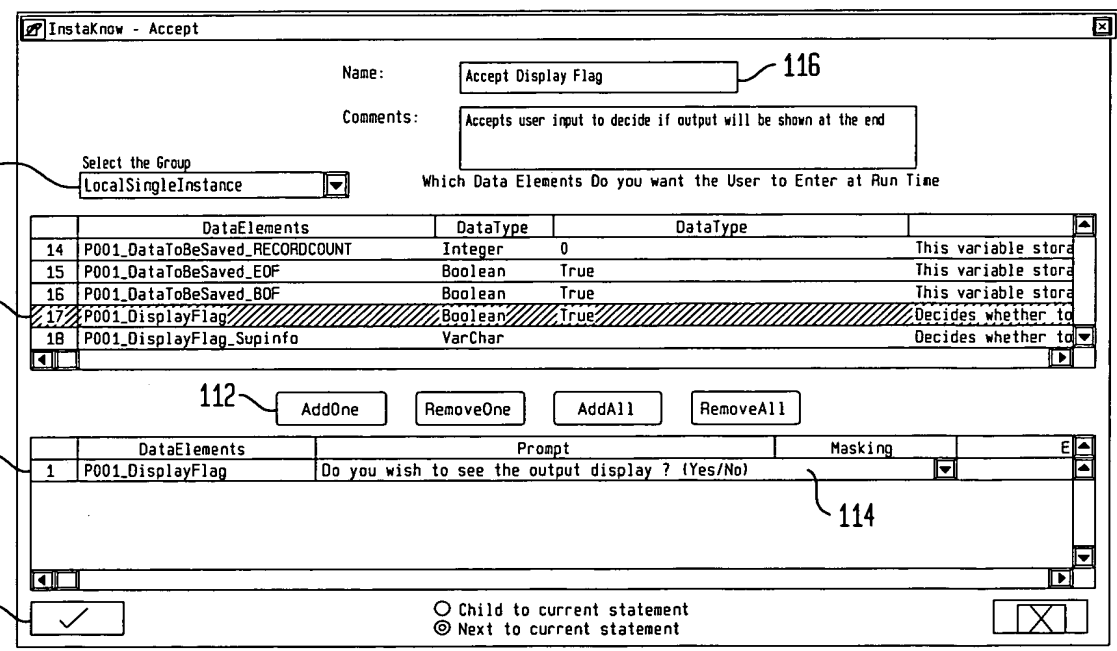
At what stage is the Application right now?:  104

At what stage is the Application right now?:  106

Color Scheme:  108

Language:  109

☐ Audio Enabled

**FIG. 11**


**InstaKnow - Accept**

Name:  116

Comments:

111 Select the Group

Which Data Elements Do you want the User to Enter at Run Time

	DataElements	DataType	DataType	
14	P001_DataToBeSaved_RECORDCOUNT	Integer	0	This variable store
15	P001_DataToBeSaved_EOF	Boolean	True	This variable store
16	P001_DataToBeSaved_BOF	Boolean	True	This variable store
17	P001_DisplayFlag	Boolean	True	Decides whether to
18	P001_DisplayFlag_Supinfo	VarChar		Decides whether to

110

112

	DataElements	Prompt	Masking	E
1	P001_DisplayFlag	Do you wish to see the output display ? (Yes/No)	<input type="text" value=""/>	

113

114

115  ☐ Child to current statement  
☒ Next to current statement

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FIG. 12

120

InstaKnow - Data Extraction Wizard

Name:  
Read Input Stock List

121

Comments:  
Read Excel workbook containing stock list

122

☐ HTML   ☐ XML   ☒ Other Data sources

123

Group Name  
ReadStockList

124

Column Name  
StockSymbol

125

Group Name  
Column Name

☒ Child to current statement  
☐ Next to current statement

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FIG. 13

InstaKnow - GET RELATIONAL DATA

130

Data Source:  131

Group Name:  131

Enter the details of your data source.

Type:  132

Path / URL:  133

☐ Disconnect after Getting Data

Rows to Extract:  Zero by default gets all rows

Cursor Type: ☐ Static ☐ Dynamic ☐ Key ☒ Forward only

☐ Finish!!!

FIG. 14

InstaKnow - GET RELATIONAL DATA

Source Tables

Select the tables to use from your data source.

Sheet1\$Database

Finish!!!

Previous

Next

Preview

Cancel

FIG. 15

InstaKnow - GET RELATIONAL DATA

Column definition

Define columns you want to use in the Business Logic

151

StockSymbol

+

-

AB

+

-

Group By:

+

-

Select the Key Columns in the next step first and then come back here to Define Group By columns

Finish!!!

Previous

Next

Preview

X

Cancel

FIG. 16

InstaKnow - GET RELATIONAL DATA

Key columns

Key columns identify unique rows.

StockSymbol

161

StockSymbol

ASC

162

◀ ▶

☐ Sort before compare

To Define a Group By column go to the previous step

© Finish!!!

◀ Previous

Next ▶

Preview

✕ Cancel

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FIG. 17

InstaKnow - GET RELATIONAL DATA

Filtering

Define filter conditions, if any to narrow down the data

+ -

Finish!!! Previous Next Preview Cancel

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FIG. 18

InstaKnow - Data Extraction Wizard

181 Name: Initial Navigate to MSN Investor

Comments:

182 ☒ HTML ☐ XML ☐ Other Data sources

183 Select the schema C:\TotalSolution\App1\Demo\msnStockInitial.xml

Time Out (sec) 20

☒ Load schema from files ☐ Load schema that is supplied

☐ Start trees current page

☒ Show Browser at run time 184

185 Select the Group P001\_msnStkInp

Starting URL: Symbol

Select the Variable 186

Show Interface Details

Group Name	Column Name
msnStkInp	Symbol_VarChar

☒ Child to current statement

☒ Next to current statement

FIG. 19

InstaKnow - Position Wizard

191 Select a group P001\_ReadStockList

192 Select a method MoveFirst

193 Comments: Read first row stock list

☒ Child to current statement

☒ Next to current statement



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FIG. 20

200

InstaKnow - Assignment Wizard

Which data element will receive the assignment (Target):

☐ Global Data Elements

P001\_msnStkInp.Symbol

Define

201

What kind of assignment do you wish to do?

☒ Value ☐ An Expression ☐ Another Data Element

The Data Element - Symbol, belonging to a group called P001\_msnStkInp is assigned a hard coded VALUE - IBM

Source Value

IBM

202

Comments:

If the Group, and the Data element is not present in the list, they can be created using the 'Define' button. This brings up the Data Define wizard.

☒ Child to current statement ☒ Next to current statement

FIG. 21

210

InstaKnow - Loops Wizard

What type of loop?

☒ While (Condition) Do... ☐ Repeat... Until (Condition)

Loop Condition:

[ .P001\_ReadStkList\_EOF]<>True

212

Wizard

214

Comments:

Click this button to bring up the Loop Condition defini wizard

☒ Child to current statement ☒ Next to current statement

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FIG. 22

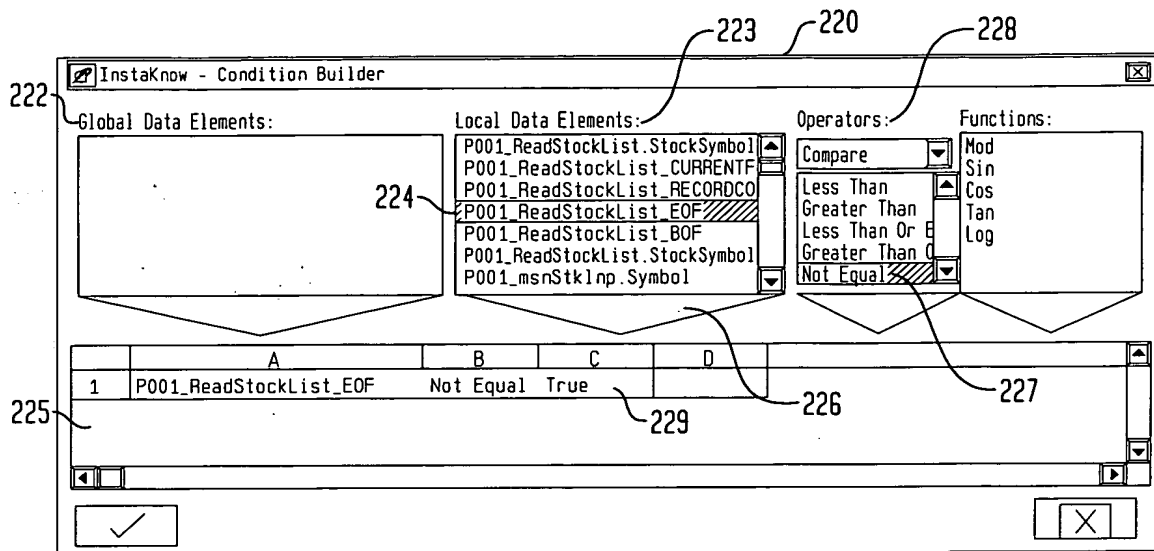
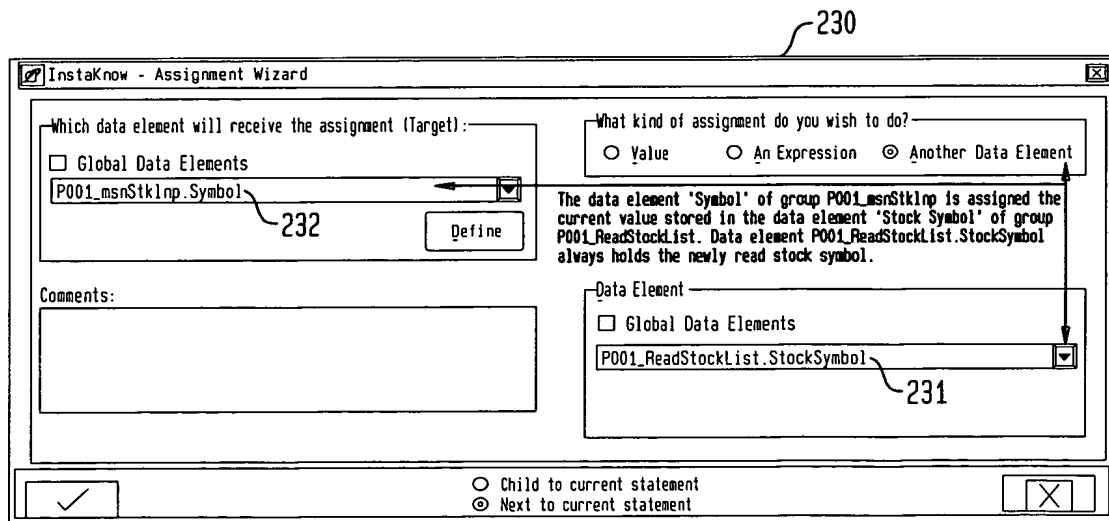


FIG. 23



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FIG. 24

The screenshot shows the 'InstaKnow - Data Extraction Wizard' window. It has a title bar with a close button. The main area contains several sections: a 'Name' field with the text 'Initial Navigate to MSN Investor' and an empty 'Comments' field; a radio button group with 'HTML' selected, and 'XML' and 'Other Data sources' options; a 'Select the schema' section with a file path 'C:\TotalSolution\App1\Demo\msnStockInitial.xml' and a 'Time Out (sec)' field set to '20'; a radio button group for 'Load schema from files' (selected) and 'Load schema that is supplied'; checkboxes for 'Start trees current page' and 'Show Browser at run time'; a 'Select the Group' dropdown menu showing 'P001\_msnStkInp' and a 'Starting URL' field with 'Symbol'; and a 'Select the Variable' dropdown menu with 'Symbol'. Below these is a 'Show Interface Details' button and a table with two columns: 'Group Name' and 'Column Name'. The table has one row with 'msnStkInp' and 'Symbol\_VarChar'. At the bottom, there is a checkbox for 'Child to current statement' (selected) and a 'Next' button.

InstaKnow - Data Extraction Wizard

Name: Initial Navigate to MSN Investor

Comments:

☒ HTML ☐ XML ☐ Other Data sources

Select the schema: C:\TotalSolution\App1\Demo\msnStockInitial.xml

Time Out (sec): 20

☒ Load schema from files ☐ Load schema that is supplied

☐ Start trees current page ☒ Show Browser at run time

Select the Group: P001\_msnStkInp

Starting URL: Symbol

Select the Variable: Symbol

Show Interface Details

Group Name	Column Name
msnStkInp	Symbol_VarChar

☒ Child to current statement ☐ Next to current statement

FIG. 25

The screenshot shows the 'InstaKnow - Assignment Wizard' window. It has a title bar with a close button. The main area contains several sections: a 'Which data element will receive the assignment (Target):' section with a checkbox for 'Global Data Elements' and a dropdown menu showing 'P001\_DataToBeSaved\_CURRENTROW' (labeled 254); a 'What kind of assignment do you wish to do?' section with radio buttons for 'Value', 'An Expression', and 'Another Data Element' (selected); a 'Data Element' section with a checkbox for 'Global Data Elements' and a dropdown menu showing 'P001\_ReadStockList.CURRENTROW' (labeled 252); and a 'Comments' section with text: 'If the Group, and the Data Element is not present in the list, it can be created using the 'Define' button. This brings up the Define Data Wizard.' At the bottom, there is a checkbox for 'Child to current statement' (selected) and a 'Next' button.

InstaKnow - Assignment Wizard

Which data element will receive the assignment (Target):

☐ Global Data Elements

P001\_DataToBeSaved\_CURRENTROW (254)

What kind of assignment do you wish to do?

☐ Value ☐ An Expression ☒ Another Data Element

The data variable - CurrentRow in Group P001\_DataToBeSaved is assigned the current value stored in another data variable - Currentrow of the P001\_ReadStockList group, which always holds the current value of the Stock for the corresponding Stock symbol.

Data Element

☐ Global Data Elements

P001\_ReadStockList.CURRENTROW (252)

Comments:

If the Group, and the Data Element is not present in the list, it can be created using the 'Define' button. This brings up the Define Data Wizard.

☒ Child to current statement ☐ Next to current statement

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FIG. 26

The dialog box is titled "InstaKnow - Position Wizard". It contains two dropdown menus: "Select a group" with "P001\_msnStk" selected (labeled 262), and "Select a method" with "MoveLast" selected (labeled 264). Below these is a "Comments:" text area containing "Go to latest extracted row". At the bottom, there are two radio buttons: "Child to current statement" (unselected) and "Next to current statement" (selected). There are also checkmark and close buttons.

FIG. 27

The dialog box is titled "InstaKnow - Assignment Wizard". It contains several fields: "Name of the Assignment:" with "SAVE P001\_DataToBeSaved As WriteToExc", "Enter Comments:" with "Move Stock details to Output", "Select the Receiving Group" with "P001\_DataToBeSaved" (labeled 272), and "Select the Sending Group" with "P001\_msnStk" (labeled 271). Below these is a table with three columns: "COLUMN NAME", "TYPE", and "TRANSFORMATION".

COLUMN NAME	TYPE	TRANSFORMATION
P001_DataToBeSaved.CompanyName	VarChar	P001_msnStk.CompanyName
P001_DataToBeSaved.CompanyName_SupInfo	BinaryString	P001_msnStk.CompanyName_SupInfo
P001_DataToBeSaved.Last	VarChar	P001_msnStk.Last
P001_DataToBeSaved.Last_SupInfo	BinaryString	P001_msnStk.Last_SupInfo
P001_DataToBeSaved.Open	VarChar	P001_msnStk.Open
P001_DataToBeSaved.Open_SupInfo	BinaryString	P001_msnStk.Open_SupInfo
P001_DataToBeSaved.Change	VarChar	P001_msnStk.Change
P001_DataToBeSaved.Change_SupInfo	BinaryString	P001_msnStk.Change_SupInfo
P001_DataToBeSaved.PreviousClose	VarChar	P001_msnStk.PreviousClose
P001_DataToBeSaved.PreviousClose_SupInfo	BinaryString	P001_msnStk.PreviousClose_SupInfo

Below the table is a checkbox "Find closest col name match" (unchecked). At the bottom, there are two radio buttons: "Child to current statement" (unselected) and "Next to current statement" (selected). There are also checkmark and close buttons.

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FIG. 28

InstaKnow - Position Wizard

281 Select a group  
P001\_ReadStockList

282 Select a method  
MoveNext

Comments:

☒ ☐ Child to current statement  
☒ Next to current statement

FIG. 29

InstaKnow - Save As Wizard

Save As Name WriteToExcel

Comments:  
The extracted stock values stored in this group will be written to the excel file against the corresponding stock symbols.

292 Select the Group to be saved  
P001\_DataToBeSaved

290 Save the Data Type  
☐ XML  
☒ Excel 291  
☐ Flat File

Number of Rows to Extract in Output  
999

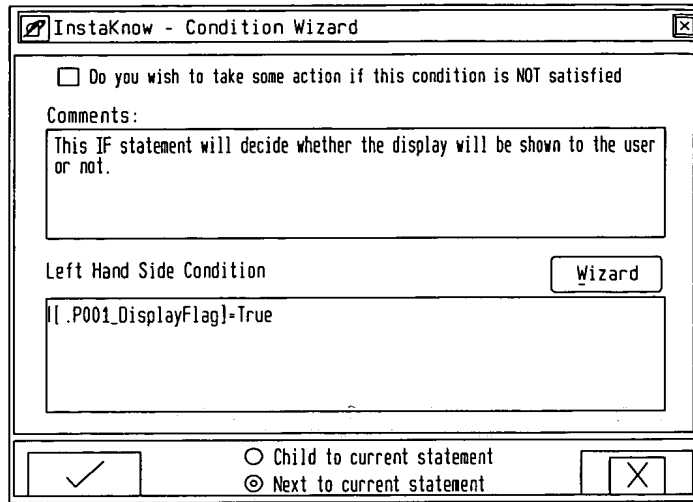
☐ Check to include the Supporting Information column

If there are spaces in the Recordset Field Names replace spaces with  
☐ Hyphens ☒ Underscore

☒ ☐ Child to current statement  
☒ Next to current statement

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FIG. 30



InstaKnow - Condition Wizard

☐ Do you wish to take some action if this condition is NOT satisfied

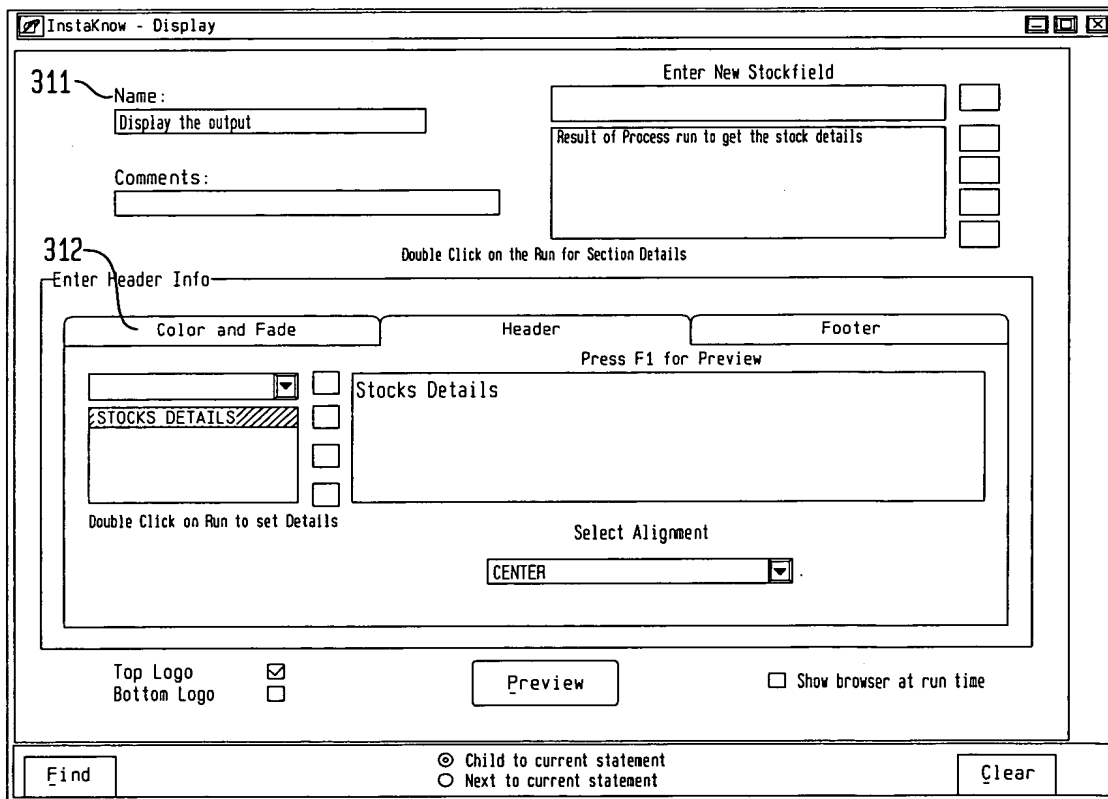
Comments:  
This IF statement will decide whether the display will be shown to the user or not.

Left Hand Side Condition Wizard

[[ .P001\_DisplayFlag]-True

☒ Child to current statement  
☒ Next to current statement

FIG. 31



InstaKnow - Display

311 Name:  Enter New Stockfield

Comments:

312 Enter Header Info Double Click on the Run for Section Details

Color and Fade Header Footer

Press F1 for Preview

Stocks Details

Double Click on Run to set Details

Select Alignment

Top Logo ☒ Bottom Logo ☐ Preview ☐ Show browser at run time

Find ☒ Child to current statement ☐ Next to current statement Clear

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FIG. 32

Details of Result of Process run to get stock details:

Select Data Group  Row Level Highlight Routine

Select Color and Font

Color and Font  Header  Footer

Press F1 for Preview

Stock Details

Select Alignment

Group Details

GroupElements  DataType

ColumnName	ColumnHead	HeaderFbf	ColumnFbf	Break	Asc/Desc	Line Type	VisibleDescr	Ar
1	P001_DataId	CompanyName		<input type="checkbox"/>	<input checked="" type="checkbox"/>			
2	P001_DataId	Last		<input type="checkbox"/>	<input type="checkbox"/>			
3	P001_DataId	Open		<input type="checkbox"/>	<input type="checkbox"/>			
4	P001_DataId	Change		<input type="checkbox"/>	<input type="checkbox"/>			

Line Type for Details  Border Width:  Border Color

Grand Totals ☐ Grid Lines ☐ Alignment  Table Width:

OK CANCEL


FIG. 33

InstaKnow Output - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Edit

Address C:\TotalSolution\StockDetailsFromMSN\Investor\Get Stock Details From MSN Investor\Display the output.htm Go Links >>



InstaKnow Output

Stock Details

330

CompanyName	Last	Open	Change	PctChange	Volume	PE	EarningsPerShare	DivPerShare
Dell Computer Corporation	41 11/16	40 7/8	+7/8	+2.14%	26.65 M	165.70	0.62	NA
Microsoft Corporation	87 5/16	86 15/16	+5/16	+0.36%	29.42 M	157.30	1.52	NA
International Business Machines Corporation	94 5/8	94 5/8	+9/16	+0.60%	8.537 M	22.30	4.22	0.48
Compaq Computer Corporation	21 3/4	21 11/16	+3/16	+0.87%	13.08 M	33.70	0.64	0.06

Done

My Computer



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FIG. 34

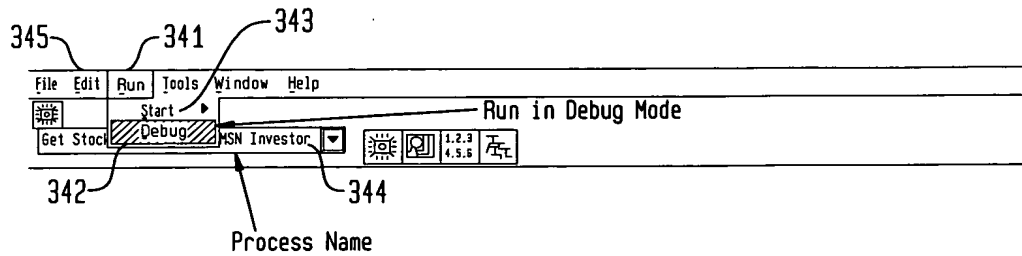
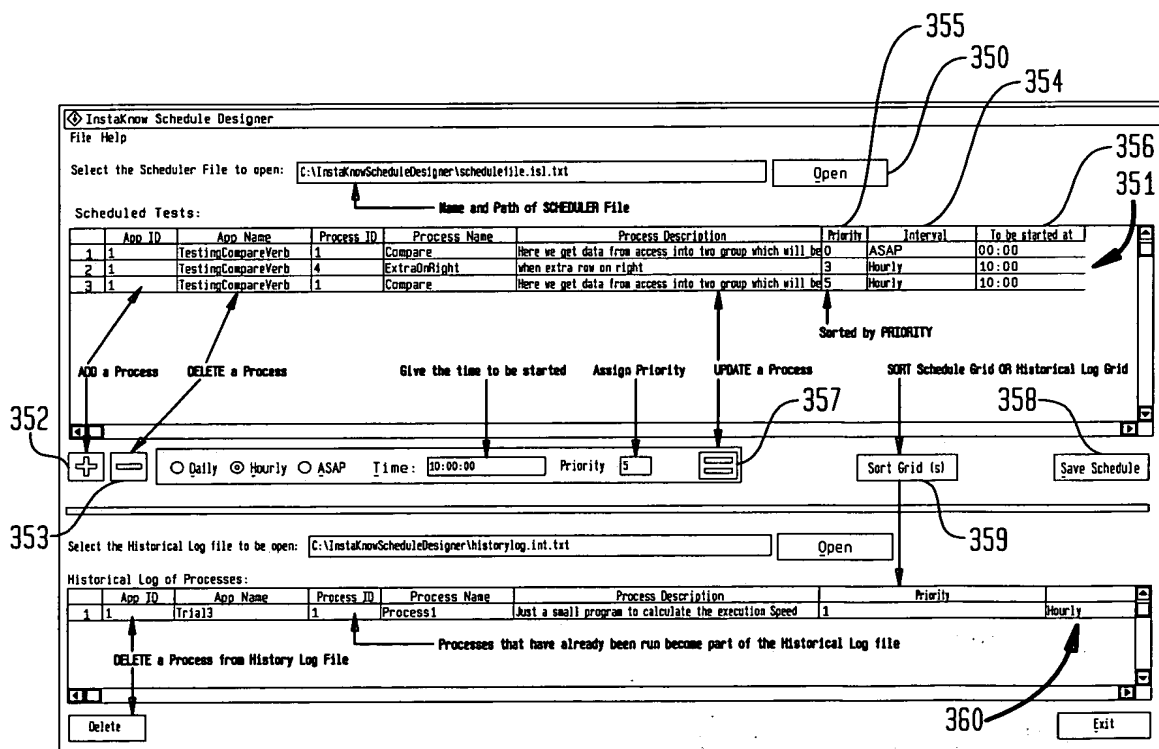


FIG. 35



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FIG. 36

**Frozen-InstaKnow Scheduler**

**Scheduler file created in InstaKnow Schedule Designer**

Scheduler File Name:

History Log File Name:

Select an interval:  minutes  Time to Start: 11/12/1999 11:15 am

Processes to be Submitted:

App.	App. Name	Process	Process Name	Process Description	Priority	Interval	To be started at
1	TestingCompareVer1	1	Compare	Here we get data from access	2	Hourly	45:00
2	TestingCompareVer4	4	ExtraOnRight	when extra row on right	3	Hourly	55:00

Processes scheduled to run in order of priority. These processes were picked up from InstaKnow scheduler file. Scheduled time to run. These processes are waiting to be executed.

**Active Process:**

App.	App. Name	Process	Process Name	Process Description	Priority	Interval	To be started at
1	TestingCompareVer1	1	Compare	Here we get data from ac	1	Hourly	50:00

☐ Show Web Browser

Frozen  Number of processes scheduled